



The Promise of Tropical Agriculture

A Vision of Eco-Efficiency

Multiple crises centered on the global climate, environment, and economy have brought tremendous pressure to bear on tropical agriculture in recent years. Can it keep pace with rapidly growing demand for agricultural products without continued over-use of agrochemicals and mining of natural resources?

Scientists with the International Center for Tropical Agriculture (CIAT) believe the answer is “yes” but only if tropical agriculture becomes far

more eco-efficient than it is today. Economically and ecologically prudent resource use, they argue, is critical for raising agricultural productivity to improve livelihoods while minimizing negative environmental impacts.

To achieve such a profound shift will require revised policies and renewed investments, which make it attractive and feasible for farmers to adopt more eco-efficient crops and production systems. This is the vision guiding CIAT’s work. We invite others to join us in making it a reality for tropical agriculture.

Strategic Research Focus

Since no single organization can address the whole of tropical agriculture, CIAT has chosen a strategic research focus that complements the efforts of numerous partners worldwide.

The Center improves beans, cassava, and tropical forages – crops that have historically been neglected in research despite their vital importance for food and nutrition security. For Latin America and the Caribbean, we conduct research on rice and tropical fruits as well. All of our work on agricultural biodiversity employs advanced biotechnology to discover useful knowledge and accelerate crop improvement.

CIAT also confronts two major issues that cut across tropical crops and production niches:

- (1) sustainable management of soil and land, and
- (2) decisions and policies that are critical for coping with climate change, environmental degradation, and economic uncertainty.



Advances in CIAT’s crop improvement research depend on unique collections of genetic resources – 65,000 crop samples in all – which we hold in trust for humanity.

A World of Promise

The term “tropical” invariably conjures up visions of exuberant vegetation, which suggests great natural diversity and productive potential. Encompassing 40 percent of the earth’s land and human population, the so-called “torrid zone” harbors far more plant and animal species than anywhere else on the planet and accounts for a quarter of global grain output.

At the same time, agriculture in the tropics projects an image of harsh and difficult farming

conditions. Nearly every famine within the last 50 years has occurred in the tropics. The food crops of tropical countries yield roughly half as much as those of the temperate zone.

This dual vision inspired the creation of CIAT and its Nigeria-based sister – the International Institute of Tropical Agriculture (IITA). While aware that great challenges lay ahead, our founders saw the tropics as a world of promise, where agriculture, with the aid of modern science, could progress substantially to reduce poverty and bolster food security.



CIAT’s approximately 200 scientists work in Latin America and the Caribbean as well as 28 countries in sub-Saharan Africa and 5 in Southeast Asia.

CGIAR Global Research

CIAT is a CGIAR Consortium Research Center, and our work contributes importantly to CGIAR Research Programs, which address the defining agricultural challenges of the 21st century. CIAT is lead center for the Climate Change, Agriculture and Food Security (CCAFS) Program, which is conducted in collaboration with the Earth System Science Partnership.

The CGIAR is a global partnership that unites organizations engaged in research for sustainable development with funders, including governments, foundations, and international and regional organizations. CGIAR research – conducted in close collaboration with hundreds of partner organizations – aims to reduce poverty and hunger, improve human health and nutrition, and enhance ecosystem resilience.

Latin America and the Caribbean

CIAT, Apartado Aéreo 6713
Km 17, Recta Cali-Palmira
Cali, Colombia
Phone: +57 2 4450000 or +1 650 8336625 (via USA)
Fax: +57 2 4450073 or +1 650 8336626 (via USA)
E-mail: ciat@cgiar.org

Sub-Saharan Africa

CIAT Africa Coordination
c/o ICIPE, Duderuville Campus, off Kasarani Road
P.O. Box 823-00621
Nairobi, Kenya
Phone: +254 20 8632800 or +254 721 574967
Fax: +254 20 8632001
E-mail: r.buruchara@cgiar.org

Southeast Asia

c/o Vietnam Academy of Agricultural Sciences
Vinh Quynh, Thanh Tri
Hanoi, Vietnam
Phone: +84 12 58262512
E-mail: r.lefroy@cgiar.org